REMARKS

Claims 1-10 are pending and under consideration in the present application.

Rejection of claim 10 under 35 USC § 112, first paragraph and 35 USC § 112, second paragraph

Claim 10 is rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the enablement requirement. Claim 10 is also rejected under 35 USC § 112, second paragraph, for allegedly being indefinite. Specifically, the Examiner asserts that the claim limitation "simultaneous" is ambiguous in that it may include deposition at "the exact same place at the same exact time," which the Examiner asserts "does not appear to be possible."

Words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004) (Ordinary, simple English words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say.); see also MPEP 2111.01.

The word "simultaneous" is defined as "existing or occurring at the same time." (see simultaneous. (2009). In *Merriam-Webster Online Dictionary*. Retrieved March 5, 2009, from www.merriam-webster.com/dictionary/simultaneous). The word simultaneous is not used inconsistently with this definition in the specification. Nothing in this definition, or in the use of the term simultaneous, addresses any spatial relationship, as Examiner has asserted it might. The Examiner has not cited any reference or text to support the contention that the term simultaneous in any context says anything at all about any spatial relationship. Applicants respectfully submit that the plain meaning of the term simultaneous is silent with regard to any spatial relationship. Applicants further submit that the term simultaneous, as it is used in claim 10, is unambiguous and is used consistently with its plain meaning to describe a temporal relationship.

In light of the present arguments, Applicants respectfully request reconsideration and withdrawal of the rejections of claim 10 under 35 U.S.C. § 112, first and second paragraph.

Rejection of claims 1-9 under 35 USC § 102(a)

Claims 1-9 under are rejected under 35 USC § 102(a) as allegedly anticipated by Mironov et al. (2003, Trends in Biotech 21:157; hereinafter "Mironov"). Specifically, the Examiner asserts that Mironov discloses a process for manufacturing complex parts and devices comprising utilizing a CAD environment to design a part or device to be created, converting the CAD designed part or device into a heterogeneous material and multi-part assembly model which can be used for multi-nozzle printing, and printing the designed part or device using multiple, different, specialized nozzles. Further, the Examiner asserts that Mironov discloses a multi-nozzle biopolymer deposition apparatus comprising a data processing system which processes a designed scaffold model and converts it into a layered process tool path, a motion control system driven by the layered process tool path, and a material delivery system comprising multiple nozzles of different types and sizes which deposits specified hydrogels with different viscosities thereby constructing a scaffold from the designed scaffold model.

Applicants respectfully submit that Mironov does not anticipate claims 1-9 of invention for the following reasons. 35 U.S.C. § 102(a) provides that an applicant shall be entitled to a patent unless "the invention was ... described in a printed publication ... before the invention thereof by the applicant for a patent." Mironov does not satisfy this requirement.

In view of the enclosed Declaration of Inventor Wei Sun, Mironov does not anticipate claims 1-9. The present application, U.S. App. Ser. No. 10/540,968, is a national stage entry application of PCT/US04/15316, filed May 14, 2004, which claims priority from U.S. Provisional App. No. 60/520,272, filed November 14, 2003. Mironov et al. was published on April 21, 2003, and was available online on February 22, 2003, less than one year before U.S. Provisional App. No. 60/520,272 was filed.

Mironov is not a proper 35 U.S.C. § 102(a) reference because Applicants of the present application invented the apparatus, as well as the processes the apparatus performs, before Mironov was published online on February 22, 2003. Prior invention by Applicants of the present invention is evidenced by the enclosed Declaration, as well as by the presence of the pictures of the apparatus shown in Figure 2a of Mironov, which were provided by Applicants of the present application to Vladimir Mironov, the lead author of Mironov, before Mironov was published online on February 22, 2003. Moreover, the descriptions of the structure and function

of the apparatus depicted in Figure 2a of Mironov et al. were provided by Applicants of the present application to Vladimir Mironov before Mironov et al. was published, as evidenced by the enclosed Declaration. Furthermore, attached to the enclosed Declaration as Exhibits 1, 2 and 3 are computer-generated graphics of the apparatus depicted in Figure 2a of Mironov, which were created by Applicants of the present application on a date prior to the publication of Mironov.

In light of the present arguments, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-9 under 35 U.S.C. § 102(a).

Rejection of claim 10 under 35 USC § 103(a)

Claim 10 is rejected under 35 U.S.C. § 103(a) for allegedly being obvious over Mironov, in view of Vozzi et al. (2003, Biomaterials 24:2533; hereinafter Vozzi). The Examiner alleges that Mironov teaches each and every element present in claim 10, including the multi-nozzle aspect of the claimed apparatus, but that Mironov does not expressly state that the nozzles are of different types and/or sizes. The Examiner then alleges that Vozzi teaches that more than one sized nozzle can be used.

Establishing a prima facie case of obviousness of a claimed invention "requires a suggestion of all limitations in a claim" in the prior art. 35 U.S.C. § 103(a); CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974); see also In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Therefore, in order to render claim 10 obvious under 35 U.S.C. §103 (a), the cited prior art must teach or suggest each and every element of claim 10.

In view of the enclosed Declaration of Inventor Wei Sun, and the arguments above under the section titled "Rejection of claims 1-9 under 35 USC § 102(a)," Mironov is not a proper § 102(a) or § 103(a) reference, because Applicants of the present application invented the apparatus, as well as the processes the apparatus performs, before Mironov was published. Vozzi, standing alone, does not disclose each and every element of claim 10. By way of one example, Vozzi does not disclose a multi-nozzle apparatus (see, for example, Figure 1 of Vozzi).

In light of the present arguments, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 10 under 35 U.S.C. § 103(a).

Summary

Applicants respectfully submit that the arguments set forth herein evidence that the pending claims are in full condition for allowance. Accordingly, favorable examination of the claims is respectfully requested at the earliest possible time.

Respectfully submitted,

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